

CLAIMS

I/We claim:

1. An apparatus for the production of inflated cellular cushioning
5 material, the apparatus comprising:
 - a dispensing unit comprising a feeding material roll, for feeding plastic material having sleeves or rows of cells, to be filled with air;
 - a first and second conveyors for receiving the feeding
10 material and holding such feeding material in a substantially flat position confining feeding material inflation, between the first and second conveyors;
 - at least one motor for rolling the first and second conveyors;
 - at least one device for supplying air or gas for providing air
15 or gas connected to an at least one air pipe inflator for directing the flow of air or gas into the feeding material; and
 - at least one welding unit for sealing the feeding material.
2. The apparatus of claim 1 wherein the first and second conveyors are used so as to control or limit the amount of air or gas inflated into the
20 sleeves or rows of cells.
3. The apparatus of claim 1 wherein the at least one device for moving the conveyors such as a motor is used.
4. The apparatus of claim 1 wherein the at least one device for supplying air or gas is positioned so as to allow the inflation of the
25 feeding materials.
5. The apparatus of claim 1 wherein the at least one device for supplying air or gas is a centrifugal blower.
6. The apparatus of claim 1 further comprising of specified distance between the first and second conveyors.

7. The apparatus of claim 1 wherein the first conveyor is mechanically situated such that the feeding material is received by the first and second conveyors so that when the feeding material is inflated, said material comes in contact with the first and second conveyors.
- 5 8. The apparatus of claim 1 wherein the first conveyor is positioned on one side of the feeding material while the second conveyor is positioned on the opposite side of the feeding material.
9. The apparatus of claim 1 wherein the welding unit is a heating bar unit controlled to reach high temperature in a predetermined time period allowing a short time interval contact with inflated feeding material.
- 10 10. The apparatus of claim 1 wherein the welding unit welds a horizontal line across the span of the feeding material.
11. The apparatus of claim 1 wherein the welding unit welds a short longitudinal line and a long horizontal line across the span of the feeding material.
- 15 12. The apparatus of claim 1 further comprising a cutting machine comprising a bottom and top cutting members for cutting the inflated cellular cushioning material at the end of the production line.
13. The apparatus of claim 1 wherein the length between each conveyor is adjustable in the up and down direction so as to allow additional air to be inflated into the feeding material.
- 20 14. The apparatus of claim 1 wherein the first conveyor may be opened for allowing an operator of the apparatus to feed the feeding material into the apparatus.
- 25 15. The apparatus of claim 1 wherein each of the first and second conveyors comprise rollers placed within a metal frame coupled to free hinges allowing the free rotation of each roller; a belt placed around the rollers such that the belt may provide forward or backward movement of the conveyors belt.
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16. The apparatus of claim 1 wherein the first and second conveyors are belt conveyors.
17. The apparatus of claim 1 wherein the first and second conveyors are belt conveyors, each conveyor comprising a belt having a width
5 sufficient to hold the position of the side edges of feeding material.
18. The apparatus of claim 1 further comprising a third and fourth conveyors for receiving the feeding material and holding such feeding material in a substantially flat position between the first and second conveyors.
- 10 19. The apparatus of claim 15 wherein the belt is a chain having a plurality of plastic units of fixed length.
20. The apparatus of claim 15 wherein the belt is made of a flexible material.
21. The apparatus of claim 15 wherein the conveyors are rollers or
15 plates.
22. A method for the production of inflated cellular material, the method comprising the steps of:
- feeding pre-welded feeding material to the apparatus;
- 20 conveying the feeding material in the opposite direction to the direction of the air flow from an air pipe inflator;
- controlling the amount of air inserted into the feeding material through the use of a first and second conveyors;
- applying at least one welding unit to the inflated feeding
25 material, thus forming inflated cellular cushioning material.
23. The method of claim 22 further comprising the step of providing the ready to use inflated cellular material at the end of the production process.